



DEPARTMENT OF PERMITTING, ENVIRONMENT, AND REGULATORY
AFFAIRS (PERA)
BOARD AND CODE ADMINISTRATION DIVISION

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION

11805 SW 26 Street, Room 208

Miami, Florida 33175-2474
T (786) 315-2590 F (786) 315-2599

www.miamidade.gov/building

NOTICE OF ACCEPTANCE (NOA)

American Shutter Products, Inc.
(CROCI North America)
11600 Adelmo Lane
Fort Myers, Florida 33966

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: "Croci Extruded" Aluminum Accordion Shutter

APPROVAL DOCUMENT: Drawing No. 16-051, titled "Croci Extruded Aluminum Accordion Shutter", sheets 1 through 9 of 9, prepared by EngCo, Inc., dated March 01, 2016, signed and sealed by Pedro De Figueiredo, P.E. on March 01, 2016, bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and the expiration date by the Miami-Dade County Product Control Section.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state, the following statement: "Miami-Dade County Product Control Approved", and NOA number, per TAS-201, TAS-202, and TAS-203, unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA **revises & renews** NOA #12-0109.02 and consists of this page 1, evidence submitted pages E-1, E-2, & E-3 as well as approval document mentioned above.

The submitted documentation was reviewed by **Helmy A. Makar, P.E., M.S.**



Helmy A. Makar
06/16/2016

NOA No. 16-0407.07
Expiration Date: 07/06/2021
Approval Date: 06/16/2016
Page 1

American Shutter Products, Inc.
(CROCI North America)

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 06-0515.01

A. DRAWINGS

1. *Drawing No. 06-150, titled " Croci Extruded Accordion Shutter ", sheets 1 through 6 of 6, prepared by EngCo, Inc., dated May 11, 2006, signed and sealed by Pedro De Figueiredo, P.E. on May 31, 2006.*

B. TESTS

1. *Test report on Large Missile Impact Test, Cyclic Wind Pressure Test and Static Wind Pressure Test of Aluminum Accordion Shutter, prepared by Construction Testing Corporation, Report No. 05-035 TAS, dated November 16, 2005, signed and sealed by Yamil G. Kuri, P.E.*

C. CALCULATIONS

1. *Comparative analysis and anchor calculations, dated May 11, 2006, pages 1 through 28 of 28, prepared by EngCo, Inc., signed and sealed by Pedro De Figueiredo, P.E.*

D. QUALITY ASSURANCE

1. *By Miami-Dade County Building Code Compliance Office.*

E. MATERIAL CERTIFICATIONS

1. *None.*

2. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 10-0120.05

A. DRAWINGS

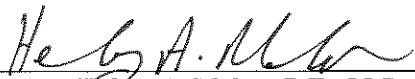
1. *Drawing No. 09-227, titled " Croci Extruded Accordion Shutter ", sheets 1 through 8 of 8, prepared by EngCo, Inc., dated December 04, 2009, signed and sealed by Pedro De Figueiredo, P.E. on May 24, 2010.*

B. TESTS

1. *Test report on Large Missile Impact Test, Cyclic Wind Pressure Test and Static Wind Pressure Test of Aluminum Accordion Shutter, prepared by Fenestration Testing Laboratory, Inc., Report No. 09-468, dated December 01, 2009, signed and sealed by Michael R. Wenzel, P.E.*

C. CALCULATIONS

1. *Comparative analysis and anchor calculations, dated 12/05/09, 24 pages, prepared by EngCo, Inc., signed and sealed by Pedro De Figueiredo, P.E.*
2. *Anchor calculations, dated 05/24/10, 2 pages, prepared by EngCo, Inc., signed and sealed by Pedro De Figueiredo, P.E.*


Melmy A. Makar, P.E., M.S.
Product Control Section Supervisor
NOA No. 16-0407.07
Expiration Date: 07/06/2021
Approval Date: 06/16/2016

American Shutter Products, Inc.
(CROCI North America)

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

D. QUALITY ASSURANCE

1. *By Miami-Dade County Building Code Compliance Office.*

E. MATERIAL CERTIFICATIONS

1. *None.*

3. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 11-0414.14

A. DRAWINGS

1. *Drawing No. 11-035, titled " Croci Extruded Aluminum Accordion Shutter ", sheets 1 through 9 of 9, prepared by EngCo, Inc., dated April 11, 2011, signed and sealed by Pedro De Figueiredo, P.E. on April 11, 2011.*

B. TESTS

1. *Test report on Large Missile Impact Test, Cyclic Wind Pressure Test and Static Wind Pressure Test of Aluminum Accordion Shutter, prepared by Fenestration Testing Laboratory, Inc., Report No. 6489, dated April 08, 2011, signed and sealed by Marlin D. Brinson, P.E.*

C. CALCULATIONS

1. *None.*

D. QUALITY ASSURANCE

1. *By Miami-Dade County Building and Neighborhood Compliance Department.*

E. MATERIAL CERTIFICATIONS

1. *None.*

4. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 12-0109.02

A. DRAWINGS

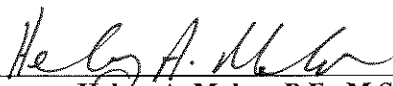
1. *Drawing No. 11-242, titled " Croci Extruded Aluminum Accordion Shutter ", sheets 1 through 9 of 9, prepared by EngCo, Inc., dated December 06, 2011, signed and sealed by Pedro De Figueiredo, P.E., on December 06, 2011.*

B. TESTS

1. *None.*

C. CALCULATIONS

1. *None.*



Helmy A. Makar, P.E., M.S.
Product Control Section Supervisor
NOA No. 16-0407.07
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D. QUALITY ASSURANCE

1. *By Miami-Dade County Department of Permitting, Environment, and Regulatory Affairs (PERA).*

E. MATERIAL CERTIFICATIONS

1. *None.*

5. NEW EVIDENCE SUBMITTED

A. DRAWINGS

1. *Drawing No. 16-051, titled " Croci Extruded Aluminum Accordion Shutter ", sheets 1 through 9 of 9, prepared by EngCo, Inc., dated March 01, 2016, signed and sealed by Pedro De Figueiredo, P.E. on March 01, 2016.*

B. TESTS

1. *None.*

C. CALCULATIONS


1. *Anchor calculations, dated 02/26/16, 30 pages, prepared by EngCo, Inc., signed and sealed by Pedro De Figueiredo, P.E.*

D. QUALITY ASSURANCE

1. *By Miami-Dade County Department of Regulatory and Economic Resources.*

E. MATERIAL CERTIFICATIONS

1. *None.*



Helmy A. Makar, P.E., M.S.
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NOA No. 16-0407.07
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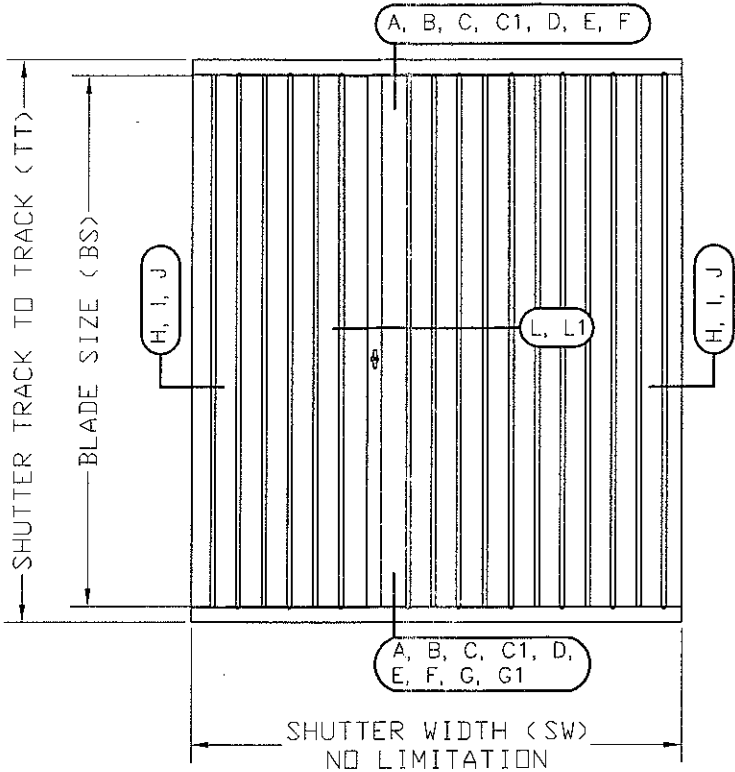
TABLE OF CONTENTS:

SHEET	DESCRIPTION
1	TABLE OF CONTENTS, GENERAL NOTES, TYPICAL ELEVATION, ALLOWABLE BLADE PRESSURE TABLE 1
2	SECTIONS A, B & C1 WITH ANCHORAGE TABLES
3	SECTIONS D, E, F & G WITH ANCHORAGE TABLES
4	SECTIONS C & G1 WITH ANCHORAGE TABLES
5	JAMB SECTIONS J, H, H1 & I
6	LOCK SECTION L, MALE & FEMALE STACK
7	LOCK SECTION L1, UNI-MATE STACK
8	BILL OF MATERIALS, ANCHOR SCHEDULE & BLADE ASSEMBLY.
9	COMPONENTS

GENERAL NOTES: (FLORIDA BUILDING CODE 2014)

- 1- DEFINITION: THIS PRODUCT IS AN ACCORDION TYPE SHUTTER; DESIGNED, CONSTRUCTED AND ERECTED TO EASILY ENCLOSE AN AREA, PROVIDING PROTECTION FROM HURRICANE FORCE WINDS AND WIND BORNE DEBRIS (LARGE & SMALL MISSILE) WITHIN THE ALLOWABLE DESIGNED PRESSURES AND LIMITATIONS STATED IN THIS APPROVAL.
- 2- CODE: THIS PRODUCT HAS BEEN TESTED AND DESIGNED IN ACCORDANCE WITH THE 2014 FLORIDA BUILDING CODE UNDER TAS 201, 202 AND 203.
- 3- POSTING: A PERMANENT LEGIBLE DECAL SHALL BE PLACED AT A READILY VISIBLE LOCATION STATING THE FOLLOWING:
- "CROCI NORTH AMERICA - FT. MYERS - FLORIDA
CROCI EXTRUDED ALUMINUM ACCORDION SHUTTER
MIAMI-DADE COUNTY PRODUCT CONTROL APPROVED"
- 4- LOADS: DESIGNED LOAD CALCULATED BASED ON THE ASCE 7 AND PROVIDED BY A PROFESSIONAL ARCHITECT OR ENGINEER FOR EACH SPECIFIC PROJECT. THE CALCULATED DESIGNED PRESSURE MUST NOT EXCEED THE ALLOWABLE PRESSURES FOR EACH SHUTTER COMPONENT TO BE USED.
- 5- MATERIAL: ALL EXTRUDED ALUMINUM SHAPES SHALL BE MADE OF 6063-T6 OR AS NOTED.
- 6- FASTENERS: ASSEMBLY SCREWS AND ANCHORS SHALL BE AS SPECIFIED IN THE CURRENT SET OF DRAWINGS. INSTALLATION AND LOADS AS PER THIS APPROVAL.
- 7- USE: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, ARCHITECT OR ENGINEER OF RECORD TO VERIFY THE FOLLOWING:
- 7.1- THE STABILITY OF THE STRUCTURE WHERE THE SHUTTER IS TO BE ATTACHED INSURING PROPER ANCHORAGE.
- 7.2- THE SITE SPECIFIC PROJECT CRITERIA, SUCH AS BUT NOT LIMITED TO, WINDLOADS, LOCAL CODE REQUIREMENTS, DESIGNED PRESSURES ETC.
- 7.3- THAT THIS APPROVAL IS ADEQUATE TO THE SPECIFIC PROJECT.
- 8- ANCHORS INTO WOOD DESIGNED WITH 1.6 LOAD DURATION INCREASE IN ACCORDANCE WITH NDS.

TYPICAL ELEVATION

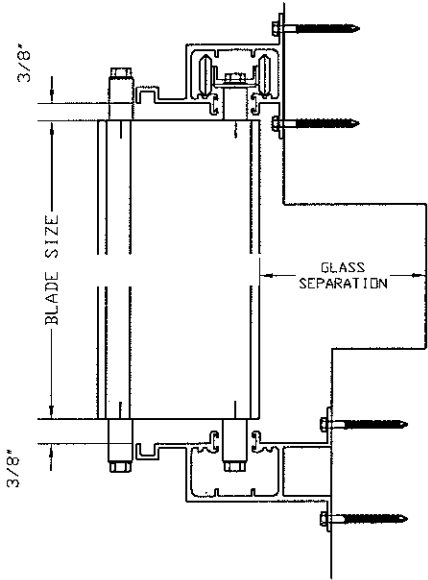


USER INSTRUCTIONS:

- 1- DETERMINE PROJECT DESIGN WIND LOAD PRESSURES AS PER ITEM 4 OF GENERAL NOTES, SHEET 1.
- 2- CHECK BLADE SIZE WITH TABLE 1 ON SHEET 1 FOR ALLOWABLE DESIGN PRESSURE.
- 3- SELECT MOUNT TYPE TO BE USED AS PER SHEETS 2, 3 & 4. MOUNT TYPES ARE INTERCHANGEABLE.
- 4- CALCULATE ANCHOR SPACING FUNCTION OF BLADE SIZE AND PRESSURE FOR EACH SPECIFIC MOUNT TYPE AS PER SHEETS 2, 3 & 4.

TABLE 1
ALLOWABLE DESIGNED LOADS
X
MAXIMUM BLADE SIZE

BLADE (IN) INCHES	PRESSURE (PSF)	
	POSITIVE	NEGATIVE
60"	188	188
66"	170	170
72"	156	156
78"	144	144
84"	134	134
90"	125	125
96"	117	117
102"	110	110
108"	102	102
114"	92	92
120"	83	83
126"	75	75
132"	69	69
138"	59	63
144"	49	58
150"	42	52



GLASS SEPARATION		
INSTALLATION BELOW 30' ELEVATION	BLADE <=120" 3 1/2"	BLADE >120" 4 3/4"
INSTALLATION ABOVE 30' ELEVATION	BLADE <=120" 3"	BLADE >120" 3"

MANUFACTURER:
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EMAIL: INFO@CROCIUSA.COM

PRODUCT:
CROCI
EXTRUDED ALUMINUM
ACCORDION SHUTTER

ENGINEER:
ENGCO INC.
CA 8116
1791 BLOUNT ROAD 907
POMPANO BEACH - FL 33069
TEL.: (754) 307-1319
FAX: (754) 271-1500
WWW.ENGCOINC.COM

PEDRO M. DE FIGUEIREDO
LICENSE
No. 52609
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
ENGINEER SEAL
PEDRO DE FIGUEIREDO
PE 52609

MAR 01 2016

MIAMI-DADE BCCO:

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 16-0407.07
Expiration Date 06/16/2016
By *Helga A. Miller*
Miami Dade Product Control

DATE: 03/01/16
SCALE: NA
DESIGN BY: PPMF

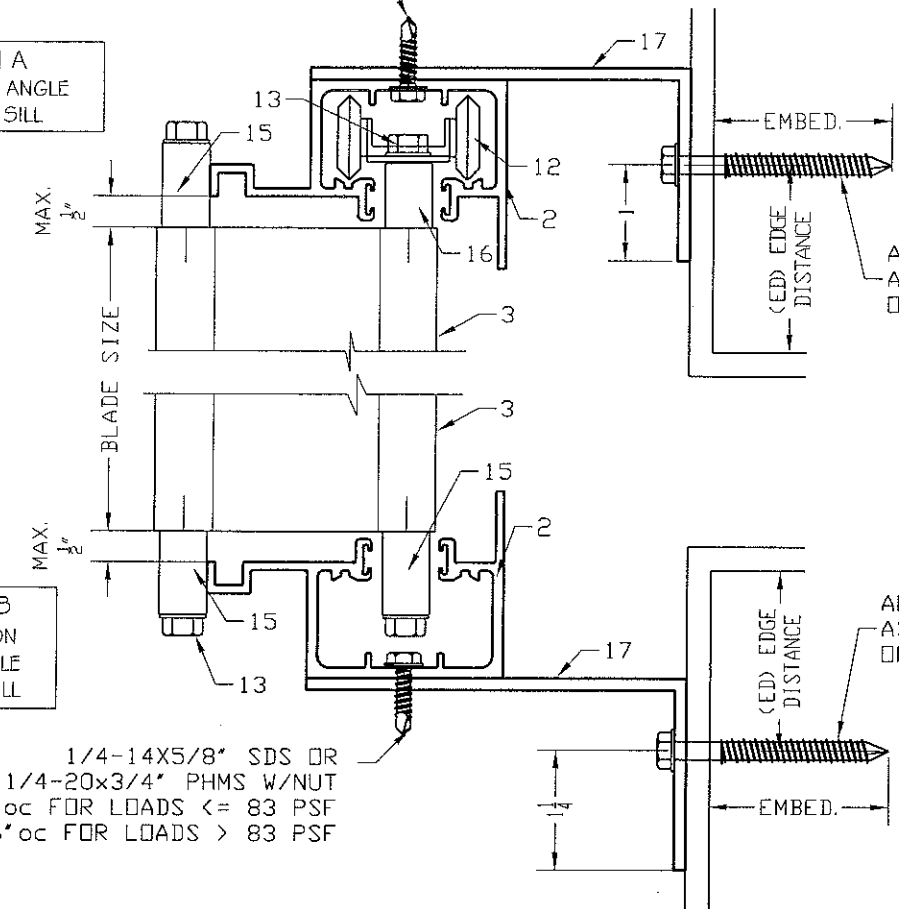
Drawing Number
16-051

SHEET
1 of 9

1/4-14X5/8" SDS OR
1/4-20X3/4" PHMS W/NUT
12" oc FOR LOADS <= 83 PSF
6" oc FOR LOADS > 83 PSF

TYPICAL VERTICAL SECTIONS AND ANCHOR SCHEDULE

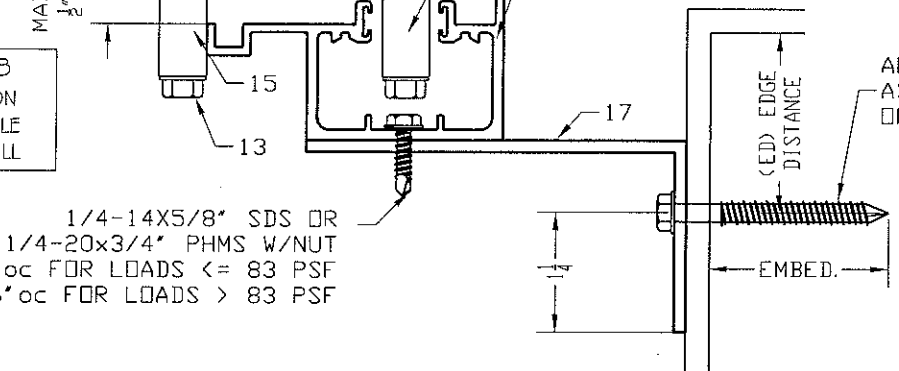
SECTION A
BUILT-OUT ON ANGLE
HEADER OR SILL



ANCHORS DESIGNED
AS PER SECTION A
ON TABLE BELOW

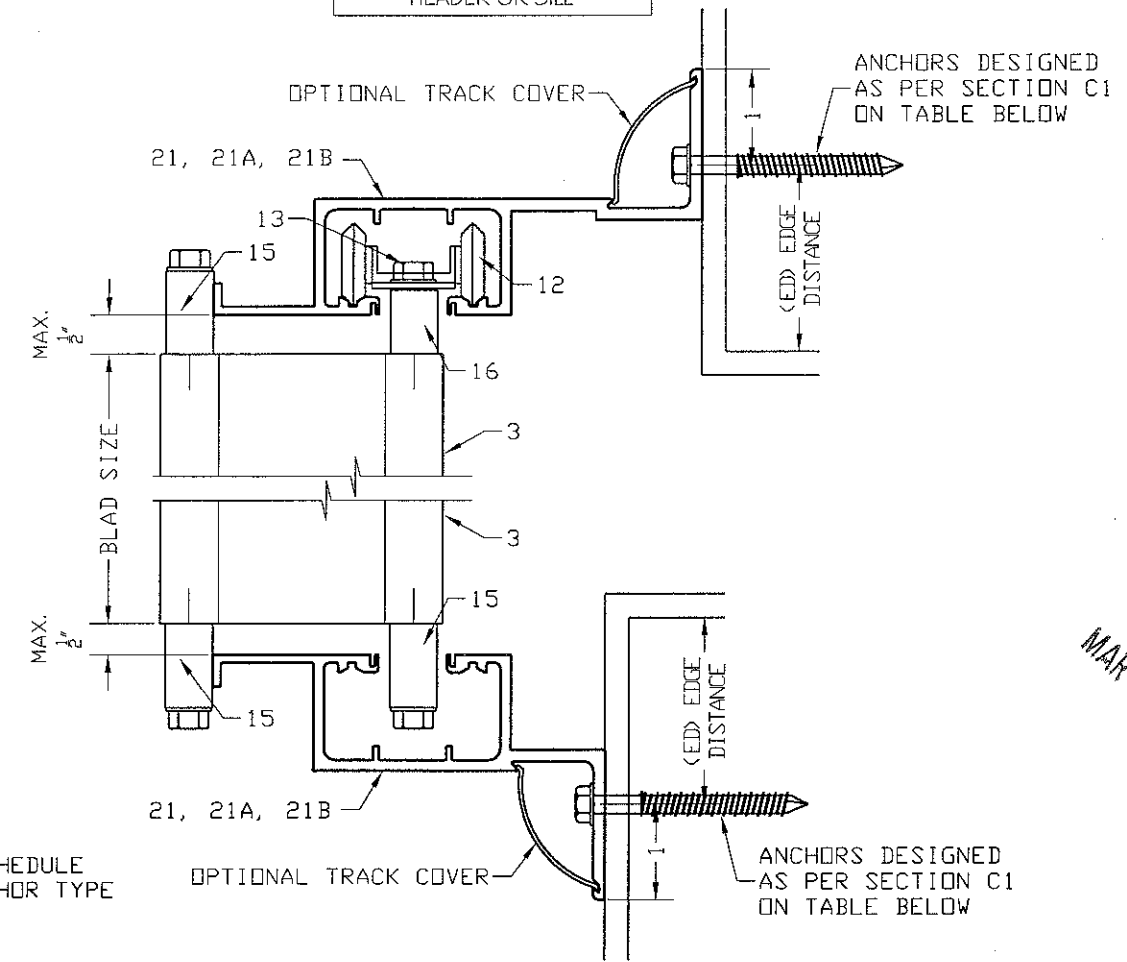
SECTION B
BUILT-OUT ON
REVERSE ANGLE
HEADER OR SILL

1/4-14X5/8" SDS OR
1/4-20X3/4" PHMS W/NUT
12" oc FOR LOADS <= 83 PSF
6" oc FOR LOADS > 83 PSF



ANCHORS DESIGNED
AS PER SECTION B
ON TABLE BELOW

SECTION C1
WALL MOUNT WITH
TRACK 21, 21A OR 21B
HEADER OR SILL



ANCHORS DESIGNED
AS PER SECTION C1
ON TABLE BELOW

ANCHORS DESIGNED
AS PER SECTION C1
ON TABLE BELOW

ALLOWABLE
PRESSURE
(PSF)
MAXIMUM
BLADE SPAN
IN INCHES

		MAXIMUM ANCHORAGE SPACING IN INCHES ON CENTER											
		SECTION A SILL / HEADER				SECTION B SILL / HEADER				SECTION C1 SILL / HEADER			
BS	Pd	A	B	C	E	A	B	C	E	A	B	C	E
60	188	9	--	12	7	5	--	7	4	7	--	8	5
	140	12	4	12	10	9	--	11	7	12	--	12	9
	100	12	5	12	12	12	5	12	12	12	5	12	12
	60	12	9	12	12	12	9	12	12	12	9	12	12
	40	12	12	12	12	12	12	12	12	12	12	12	12
90	188	6	--	7	4	--	--	4	--	--	--	4	--
	160	7	--	8	5	4	--	5	3	4	--	5	3
	125	9	--	12	7	5	--	7	4	7	--	8	5
	80	12	4	12	12	12	--	12	9	12	4	12	12
	35	12	10	12	12	12	10	12	12	12	10	12	12
108	125	7	--	9	6	4	--	5	3	5	--	6	4
	100	10	--	12	8	6	--	7	4	7	--	9	5
	80	12	--	12	10	8	--	10	6	11	--	12	8
	70	12	4	12	11	11	--	12	8	12	4	12	11
	35	12	8	12	12	12	8	12	12	12	8	12	12
120	105	8	--	10	6	4	--	6	3	5	--	7	4
	90	10	--	12	8	6	--	7	4	7	--	9	5
	85	11	--	12	8	6	--	8	5	8	--	10	6
	60	12	4	12	12	12	--	12	9	12	4	12	12
	35	12	8	12	12	12	8	12	12	12	8	12	12
150	85	8	--	10	6	4	--	5	3	5	--	7	4
	65	12	--	12	9	7	--	8	5	9	--	11	6
	55	12	4	12	10	9	--	11	7	12	--	12	9
	45	12	5	12	12	12	4	12	10	12	5	12	12
	35	12	6	12	12	12	6	12	12	12	6	12	12

REFER TO ANCHOR SCHEDULE
ON SHEET 8 FOR ANCHOR TYPE

NOTES:
1- USE IN CONJUNCTION WITH TABLE 1, THE LOWER OF THE PRESSURE CONTROL DESIGN.
2- LINEAR INTERPOLATION IS ALLOWABLE BETWEEN BLADE SPAN SIZES

MANUFACTURER:
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MIAMI-DADE BCCO:

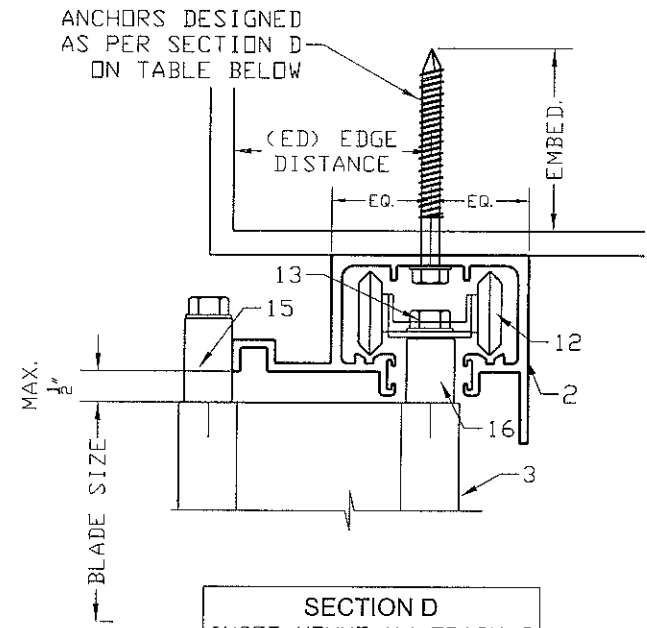
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Miami Dade Product Control

DATE: 03/01/16
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DESIGN BY: PPMF

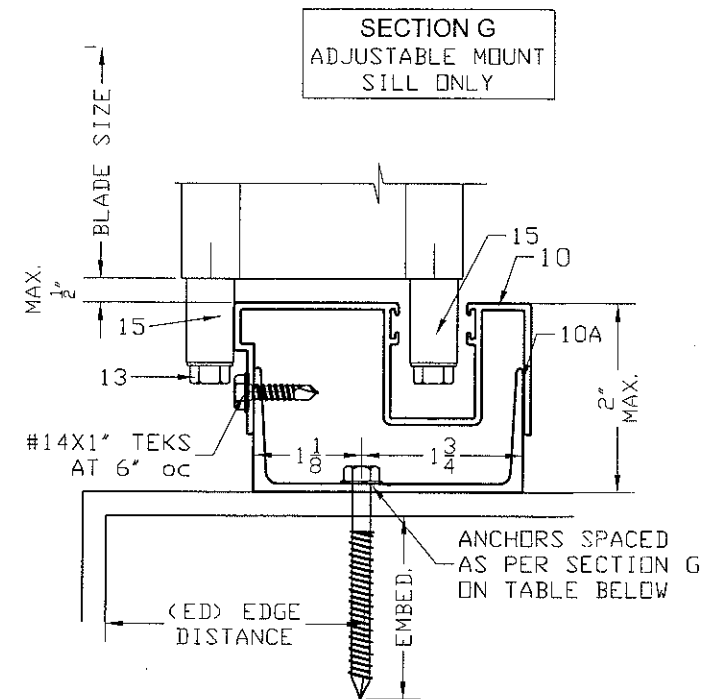
Drawing Number
16-051

SHEET
2 of 9

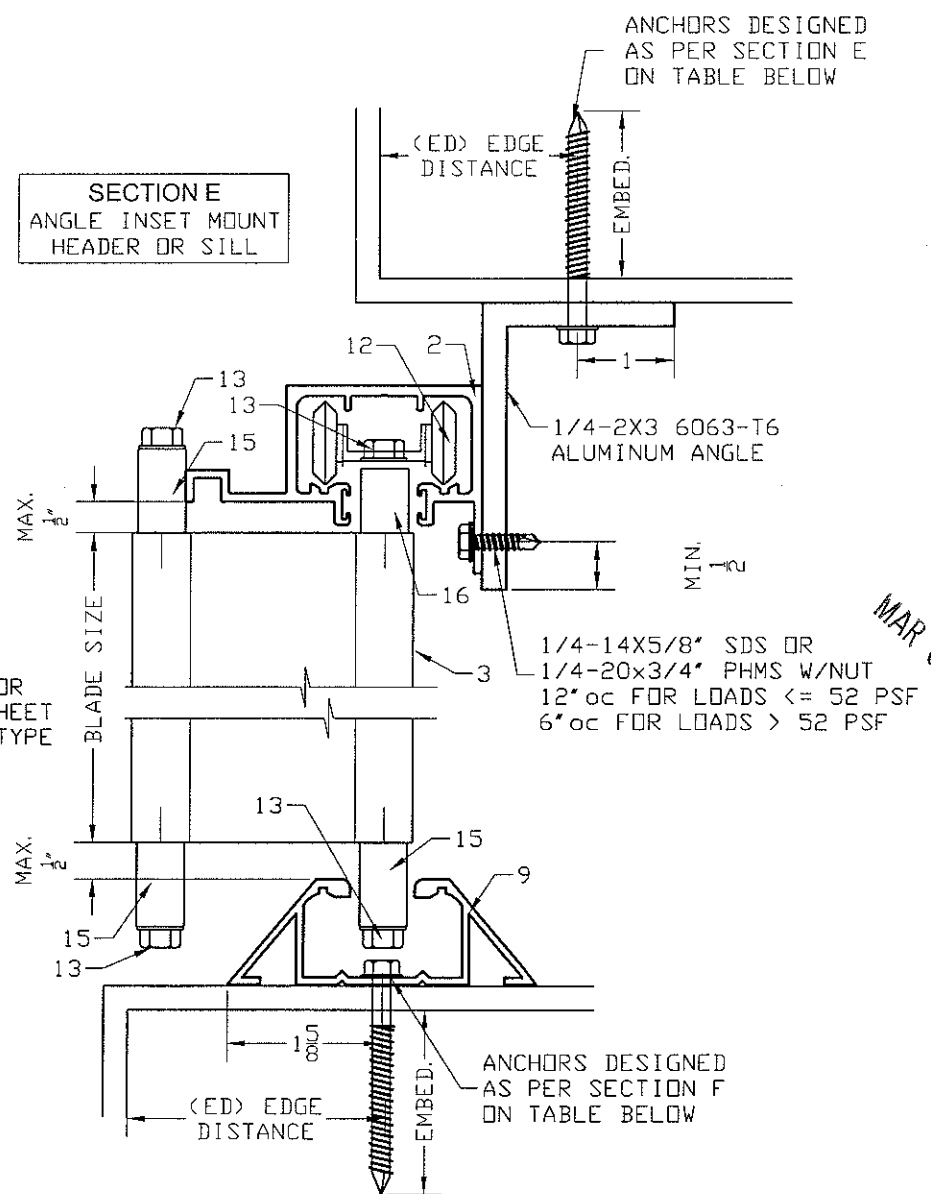
TYPICAL VERTICAL SECTIONS
AND ANCHOR SCHEDULE



SECTION D
INSET MOUNT W/ TRACK 2
HEADER OR SILL



SECTION E
ANGLE INSET MOUNT
HEADER OR SILL



SECTION F
THRESHOLD TRACK
INSET MOUNT
HEADER OR SILL

ALLOWABLE
PRESSURE
(PSF)
MAXIMUM
BLADE SPAN
IN INCHES

		MAXIMUM ANCHORAGE SPACING IN INCHES ON CENTER																	
		SECTION D SILL / HEADER				SECTION G SILL				SECTION E SILL / HEADER					SECTION F SILL / HEADER				
BS	Pd	A	B	C	E	A	B	C	E	A	B	C	D	E	A	B	C	E	
60	188	5	--	4	10	6	4	4	11	5	--	4	11	12	6	--	4	8	
	140	8	5	6	12	8	5	5	12	8	5	6	12	12	8	5	5	12	
	100	12	8	8	12	12	8	8	12	12	8	9	12	12	12	8	8	16	
	60	12	12	14	12	12	12	12	12	12	12	12	12	12	12	16	13	13	16
	40	12	12	12	12	12	12	12	12	12	12	12	12	12	12	16	16	16	16
90	188	--	--	--	4	--	--	--	5	--	--	--	5	4	--	--	--	4	
	160	4	--	--	6	4	--	3	8	--	--	3	6	6	4	--	3	5	
	125	5	--	4	10	6	4	4	11	5	--	4	11	12	6	--	4	8	
	80	10	6	7	12	10	6	6	12	10	6	7	12	12	10	6	6	14	
	35	12	12	12	12	12	12	12	12	12	12	12	12	12	16	15	15	16	
108	125	4	--	--	7	5	--	3	9	--	--	3	7	7	4	--	3	6	
	100	6	--	4	12	6	4	4	12	5	--	4	12	12	6	4	4	8	
	80	8	5	6	12	8	5	5	12	8	5	6	12	12	8	5	5	11	
	70	9	6	6	12	9	6	6	12	9	6	7	12	12	9	6	6	13	
	35	12	12	12	12	12	12	12	12	12	12	12	12	12	16	13	13	16	
120	105	4	--	--	8	5	--	3	10	4	--	3	8	8	5	--	3	6	
	90	6	--	4	12	6	4	4	12	5	--	4	12	12	6	4	4	8	
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150	85	4	--	--	8	5	--	3	10	4	--	3	8	8	5	--	3	6	
	65	7	4	5	12	7	5	5	12	7	4	5	12	12	7	5	5	10	
	55	8	5	6	12	8	5	6	12	8	5	6	12	12	8	5	6	12	
	45	10	7	7	12	10	7	7	12	10	7	8	12	12	10	7	7	14	
	35	12	9	9	12	12	9	9	12	12	9	10	12	12	13	9	9	16	

REFER TO ANCHOR
SCHEDULE ON SHEET
8 FOR ANCHOR TYPE

NOTES:
1- USE IN CONJUNCTION WITH TABLE 1, THE LOWER OF THE PRESSURE CONTROL DESIGN.
2- LINEAR INTERPOLATION IS ALLOWABLE BETWEEN BLADE SPAN SIZES

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STATE OF
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MAR 01 2016
ENGINEER SEAL
PEDRO DE FIGUEIREDO
PE 52609

MIAMI-DADE BCCO:

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By *Helga A. Mc...*
Miami Dade Product Control

DATE: 03/01/16
SCALE: NA
DESIGN BY: PPMF

Drawing Number
16-051

SHEET
3 of 9

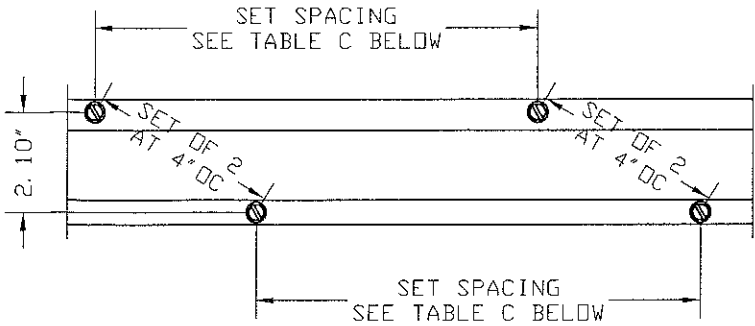
TYPICAL VERTICAL SECTIONS
AND ANCHOR SCHEDULE

ALLOWABLE
PRESSURE
(PSF)

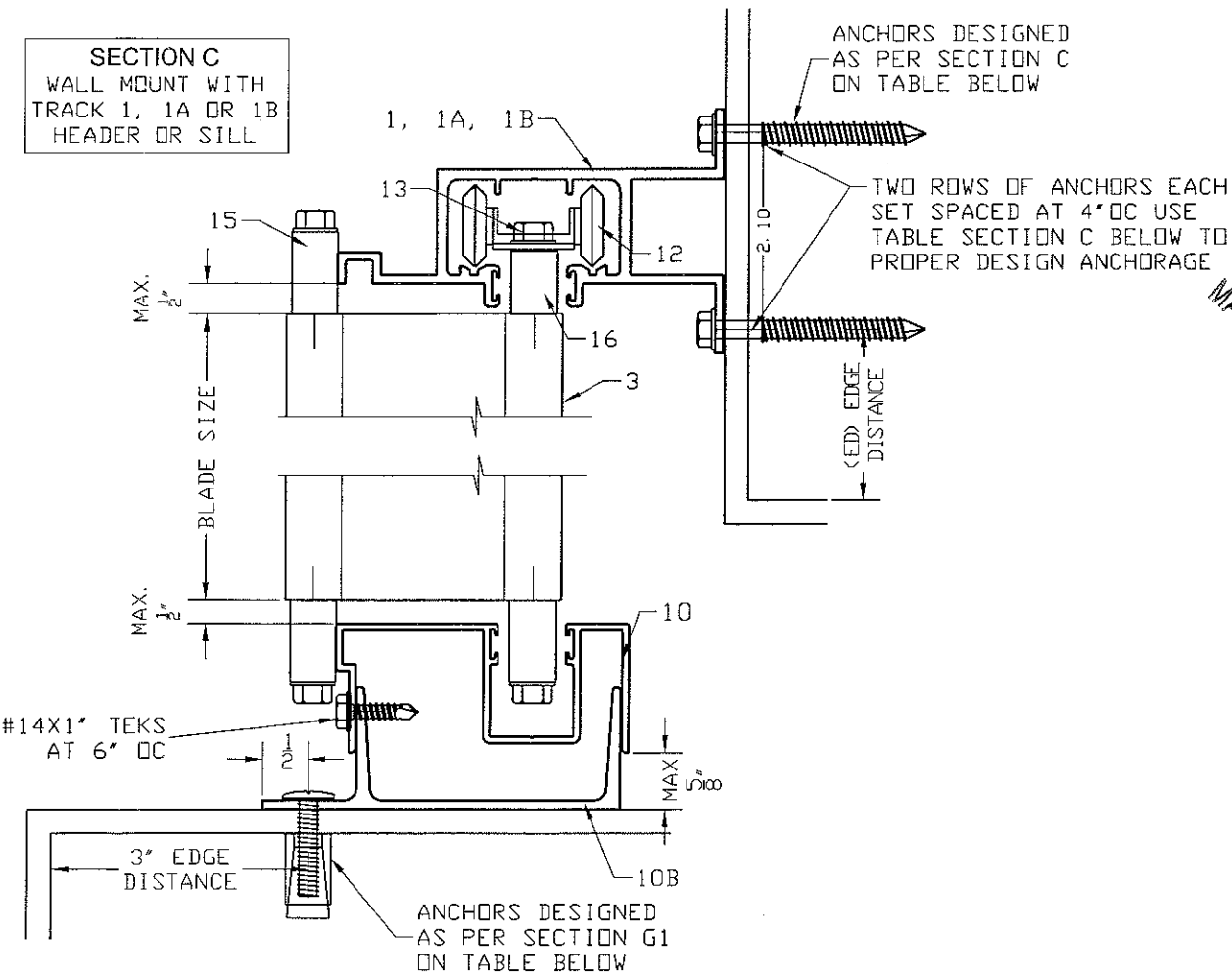
MAXIMUM
BLADE SPAN
IN INCHES

		MAXIMUM ANCHORAGE SPACING IN INCHES ON CENTER									
		SECTION C SILL / HEADER					SECTION G1 SILL / HEADER				
BS	Pd	A	B	C	E		A	B	C	D	E
60	188	22	6	24	17		6	4	4	12	11
	140	24	8	24	21		8	5	5	12	12
	100	24	11	24	24		12	8	8	12	12
	60	24	18	24	24		12	12	12	12	12
	40	24	24	24	24		12	12	12	12	12
90	188	17	4	21	13		--	--	--	7	5
	160	19	5	23	14		4	--	3	10	8
	125	22	6	24	17		6	4	4	12	11
	80	24	9	24	24		10	6	6	12	12
	35	24	21	24	24		12	12	12	12	12
108	125	20	5	24	15		5	--	3	12	9
	100	22	6	24	17		6	4	4	12	12
	80	24	7	24	20		8	5	5	12	12
	70	24	8	24	23		9	6	6	12	12
	35	24	17	24	24		12	12	12	12	12
120	105	20	6	24	15		5	--	3	12	10
	90	22	6	24	17		6	4	4	12	12
	85	23	6	24	18		7	4	4	12	12
	60	24	9	24	24		10	6	6	12	12
	35	24	16	24	24		12	11	11	12	12
150	85	20	5	24	15		5	--	3	12	10
	65	24	6	24	18		7	5	5	12	12
	55	24	8	24	21		8	5	6	12	12
	45	24	10	24	24		10	7	7	12	12
	35	24	12	24	24		12	9	9	12	12

REFER TO ANCHOR
SCHEDULE ON SHEET 8
FOR ANCHOR TYPE



SECTION C
WALL MOUNT WITH
TRACK 1, 1A OR 1B
HEADER OR SILL



SECTION G1
ADJUSTABLE MOUNT
SILL ONLY

NOTES:
1- USE IN CONJUNCTION WITH TABLE 1, THE LOWER OF THE PRESSURE CONTROL DESIGN.
2- LINEAR INTERPOLATION IS ALLOWABLE BETWEEN BLADE SPAN SIZES

MANUFACTURER:
CROCI
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PRODUCT:
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EXTRUDED ALUMINUM
ACCORDION SHUTTER

ENGINEER:
ENGCO INC.
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FAX: (754) 205-6000
WWW.ENGCOINC.COM

PEDRO DE FIGUEIREDO
LICENSE
No. 52609
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
MAR 01 2016

MIAMI-DADE BCCO:

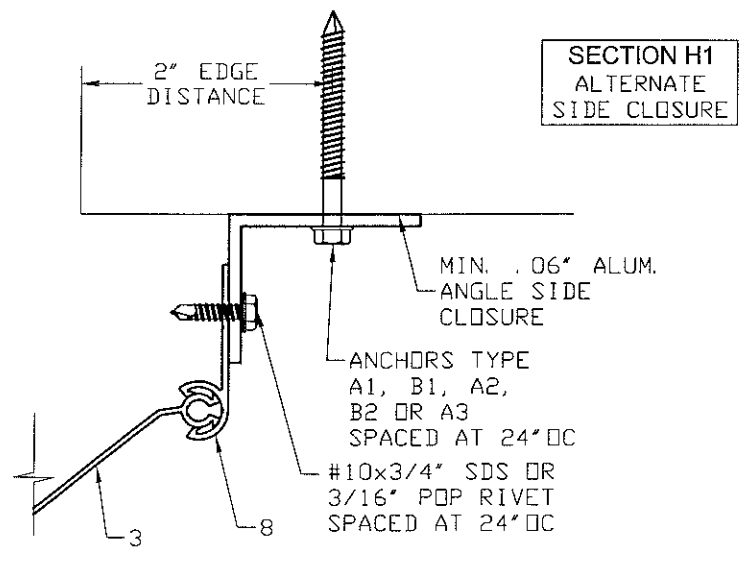
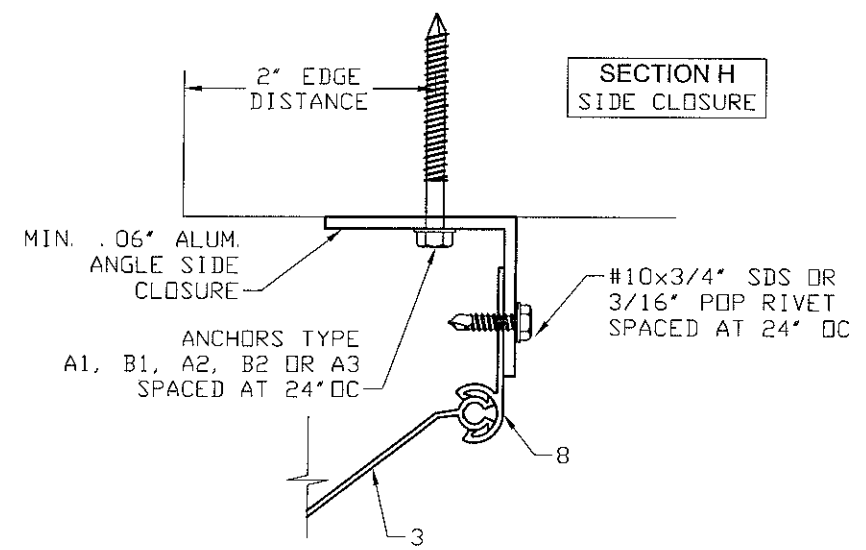
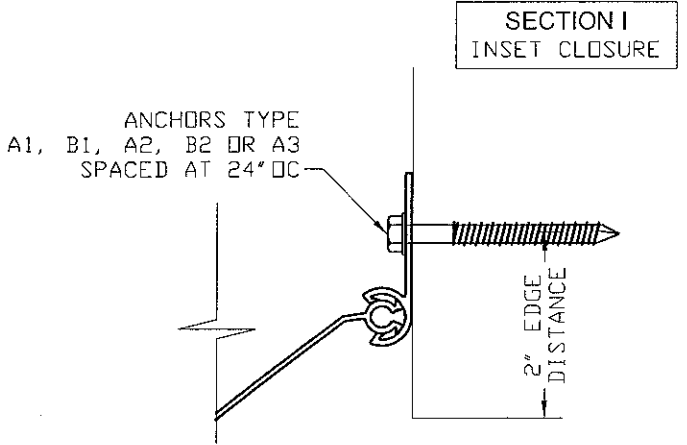
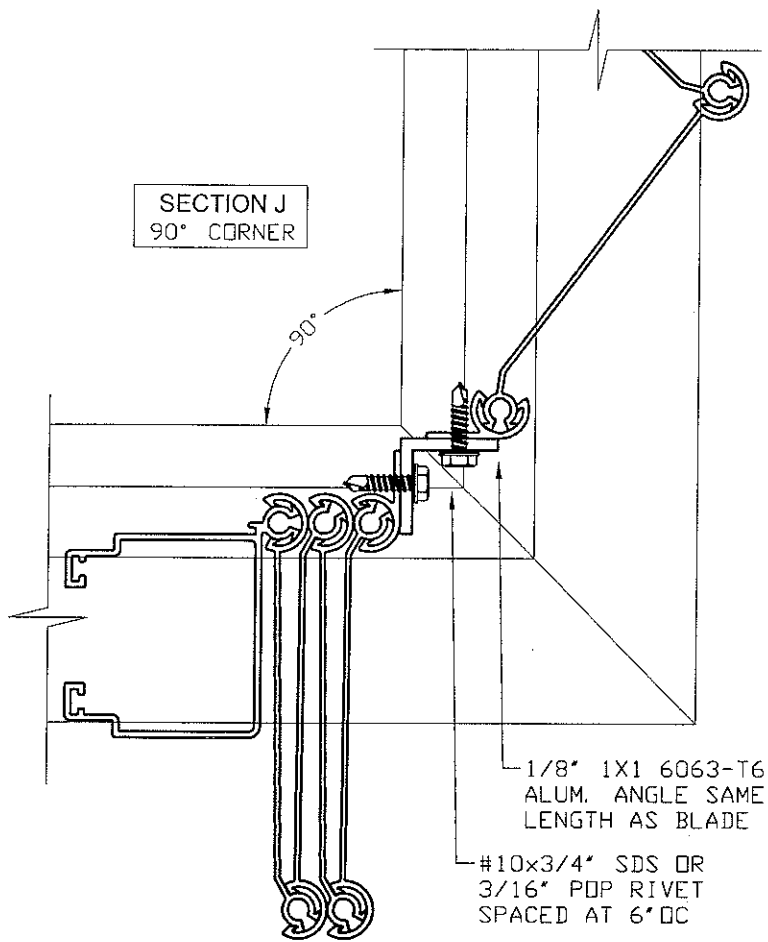
PRODUCT REVISED
as complying with the Florida
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Acceptance No. 16-0407.07
Expiration Date 06/16/2016
By *[Signature]*
Miami Dade Product Control

DATE: 03/01/16
SCALE: NA
DESIGN BY: PPMF

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16-051

SHEET
4 of 9

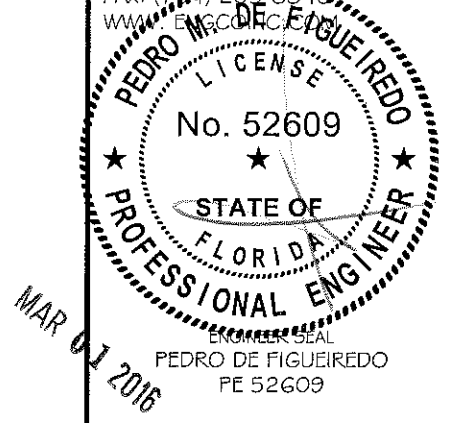
TYPICAL HORIZONTAL SECTIONS
JAMB & CORNER SECTIONS



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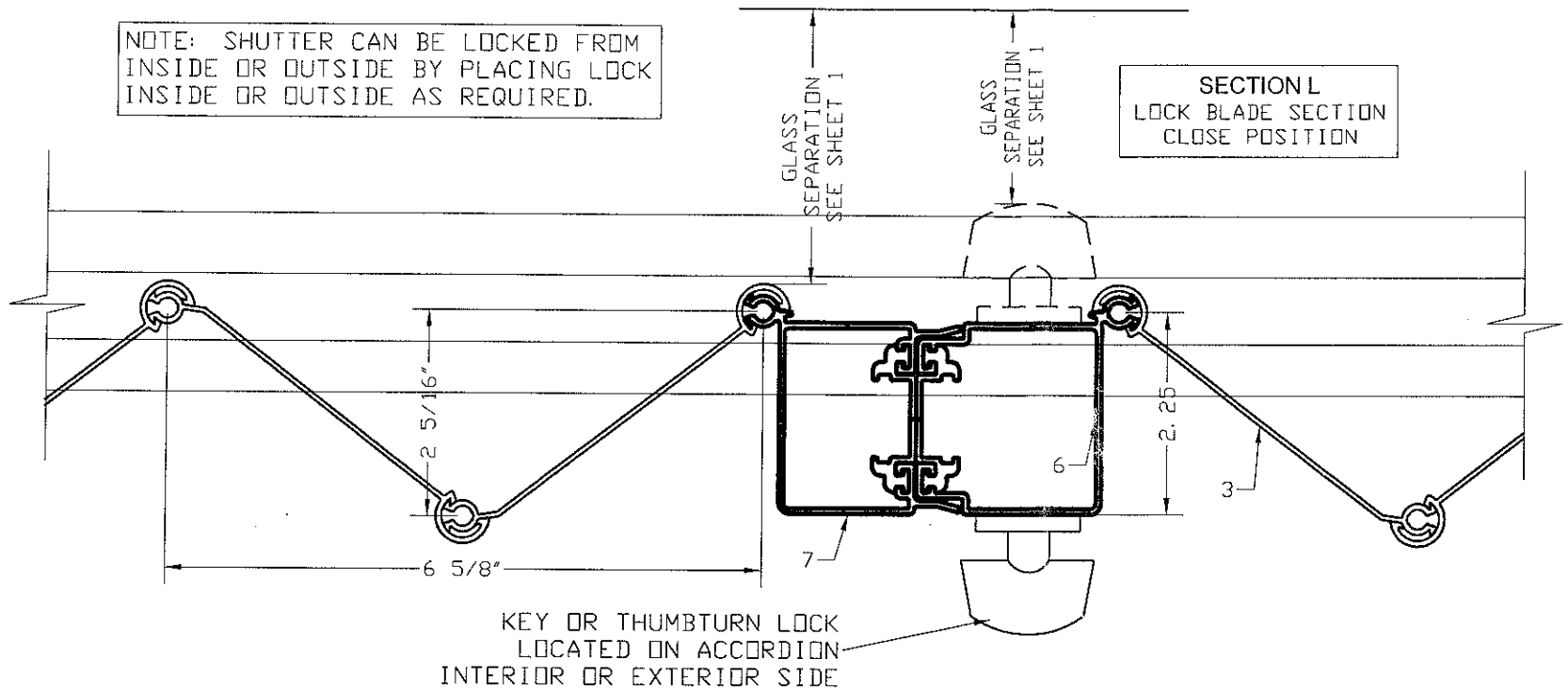
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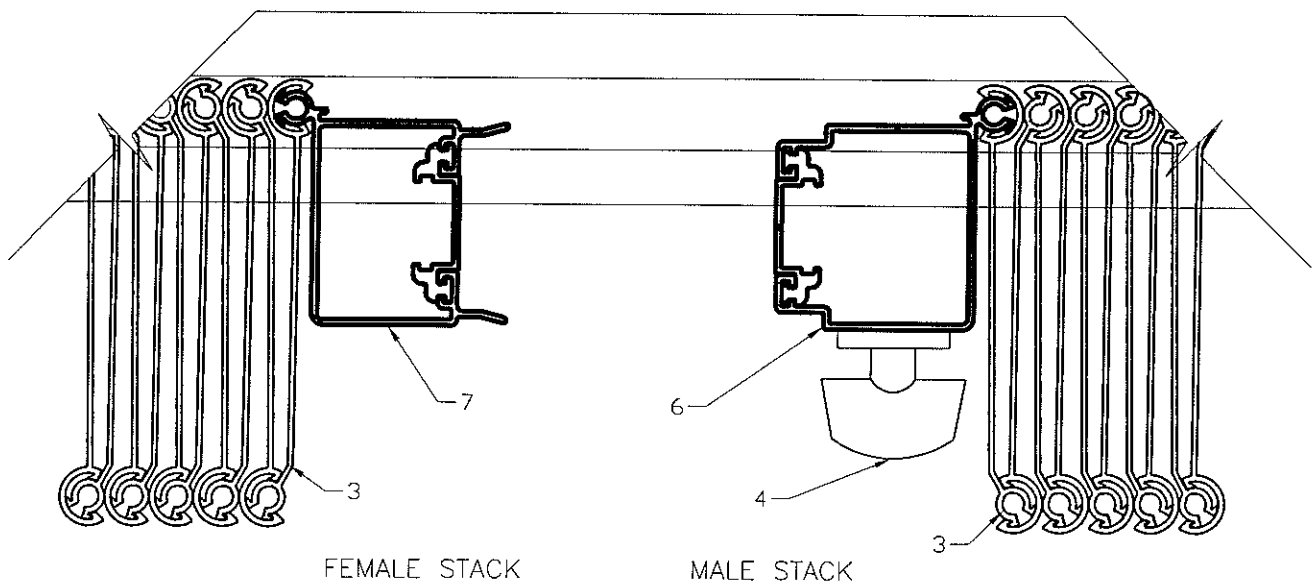
SHEET
5 of 9

TYPICAL HORIZONTAL SECTIONS
LOCK SECTIONS

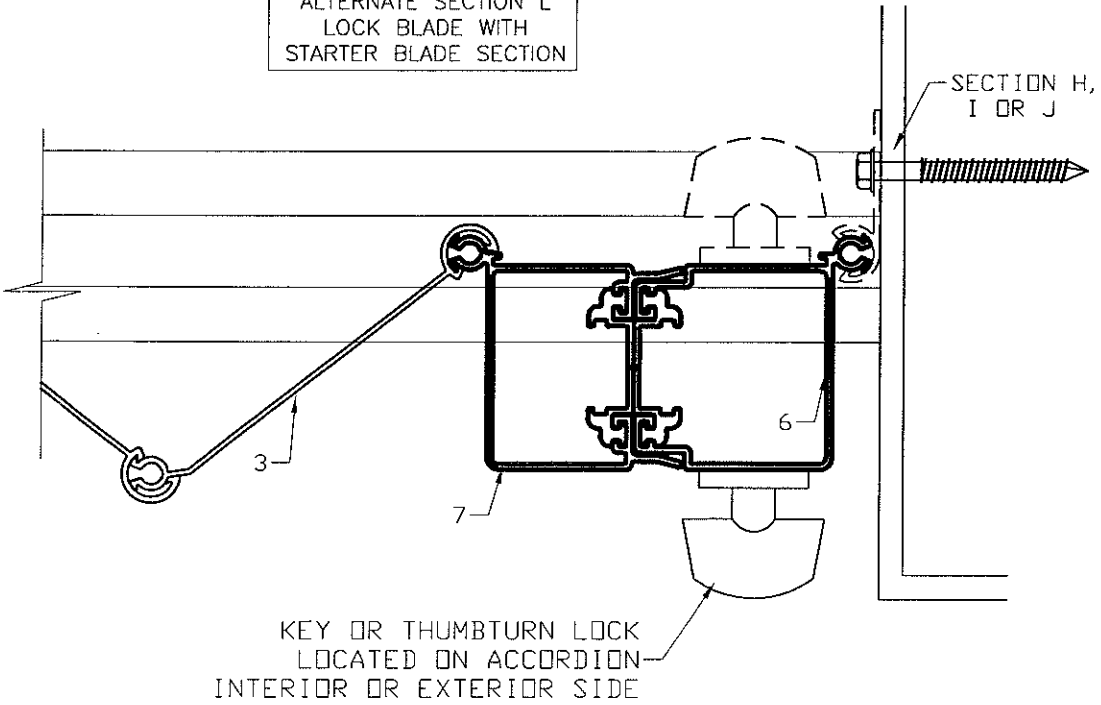
NOTE: SHUTTER CAN BE LOCKED FROM
INSIDE OR OUTSIDE BY PLACING LOCK
INSIDE OR OUTSIDE AS REQUIRED.



SECTION L
LOCK BLADE SECTION
OPEN POSITION



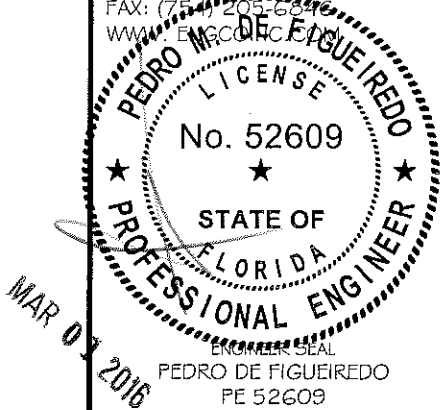
ALTERNATE SECTION L
ALTERNATE SECTION L
LOCK BLADE WITH
STARTER BLADE SECTION



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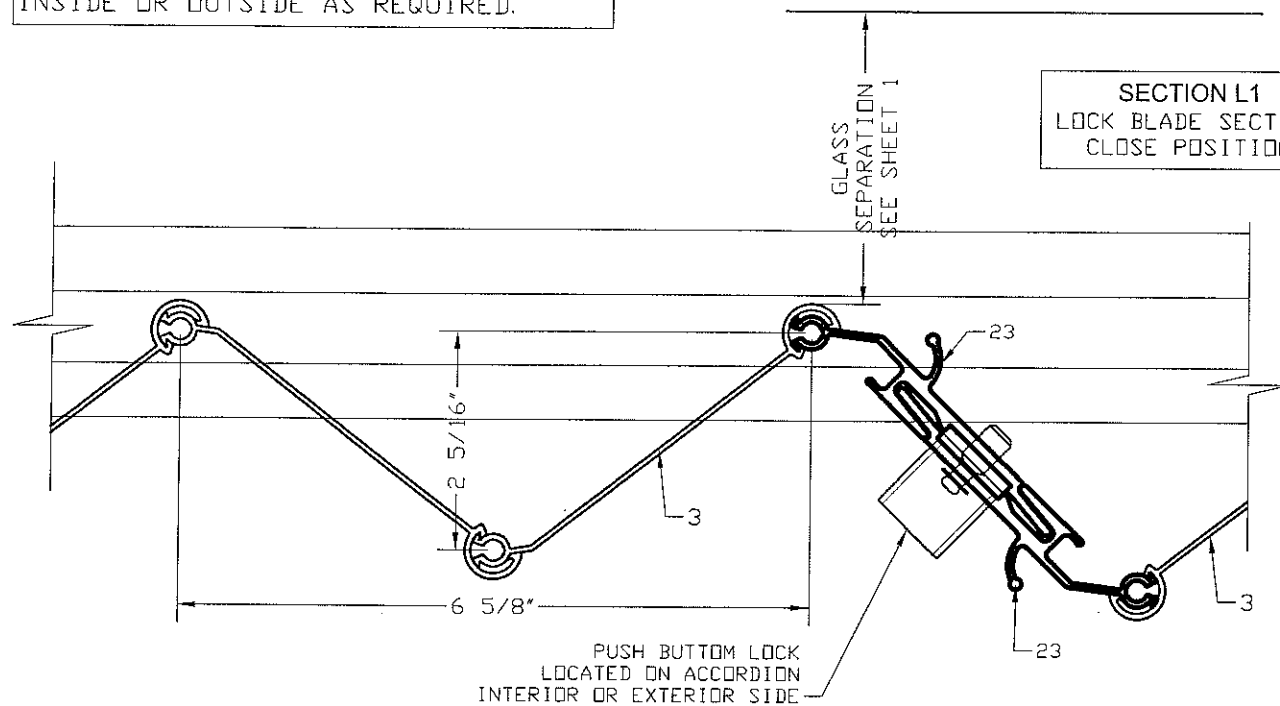
DATE: 03/01/16
SCALE: NA
DESIGN BY: PPMF

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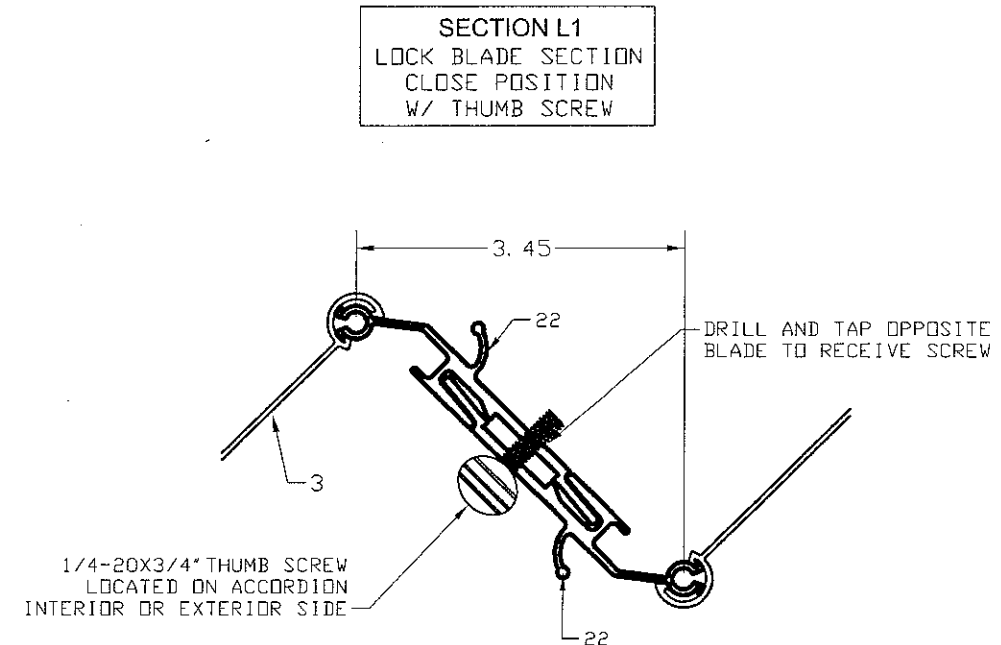
SHEET
6 of 9

TYPICAL HORIZONTAL UNIMATE LOCK SECTIONS

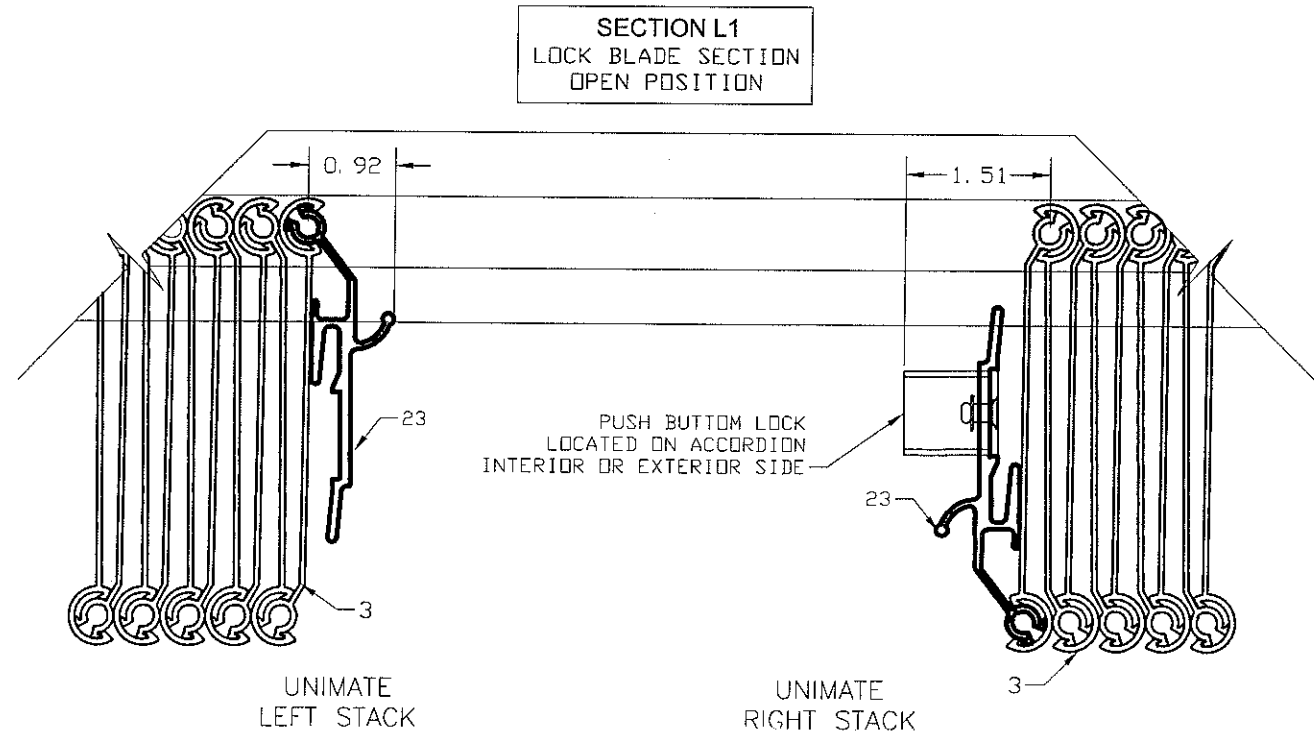
NOTE: SHUTTER CAN BE LOCKED FROM
INSIDE OR OUTSIDE BY PLACING
THE PUSH BUTTON LOCK OR THUMB SCREW
INSIDE OR OUTSIDE AS REQUIRED.



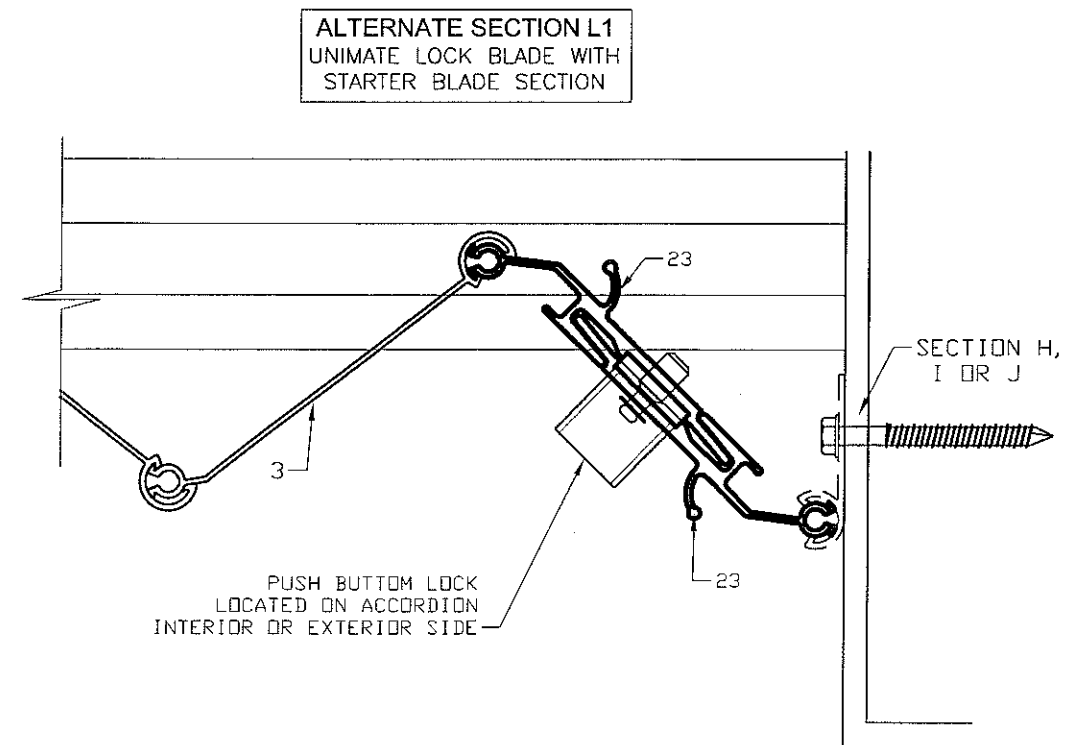
SECTION L1
LOCK BLADE SECTION
CLOSE POSITION



SECTION L1
LOCK BLADE SECTION
CLOSE POSITION
W/ THUMB SCREW



SECTION L1
LOCK BLADE SECTION
OPEN POSITION

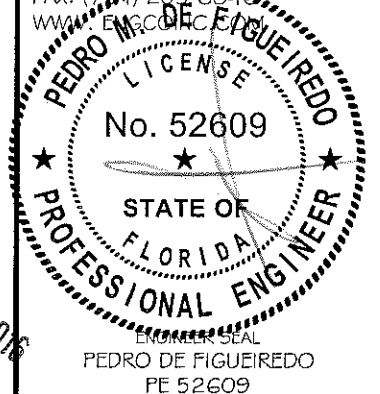


ALTERNATE SECTION L1
UNIMATE LOCK BLADE WITH
STARTER BLADE SECTION

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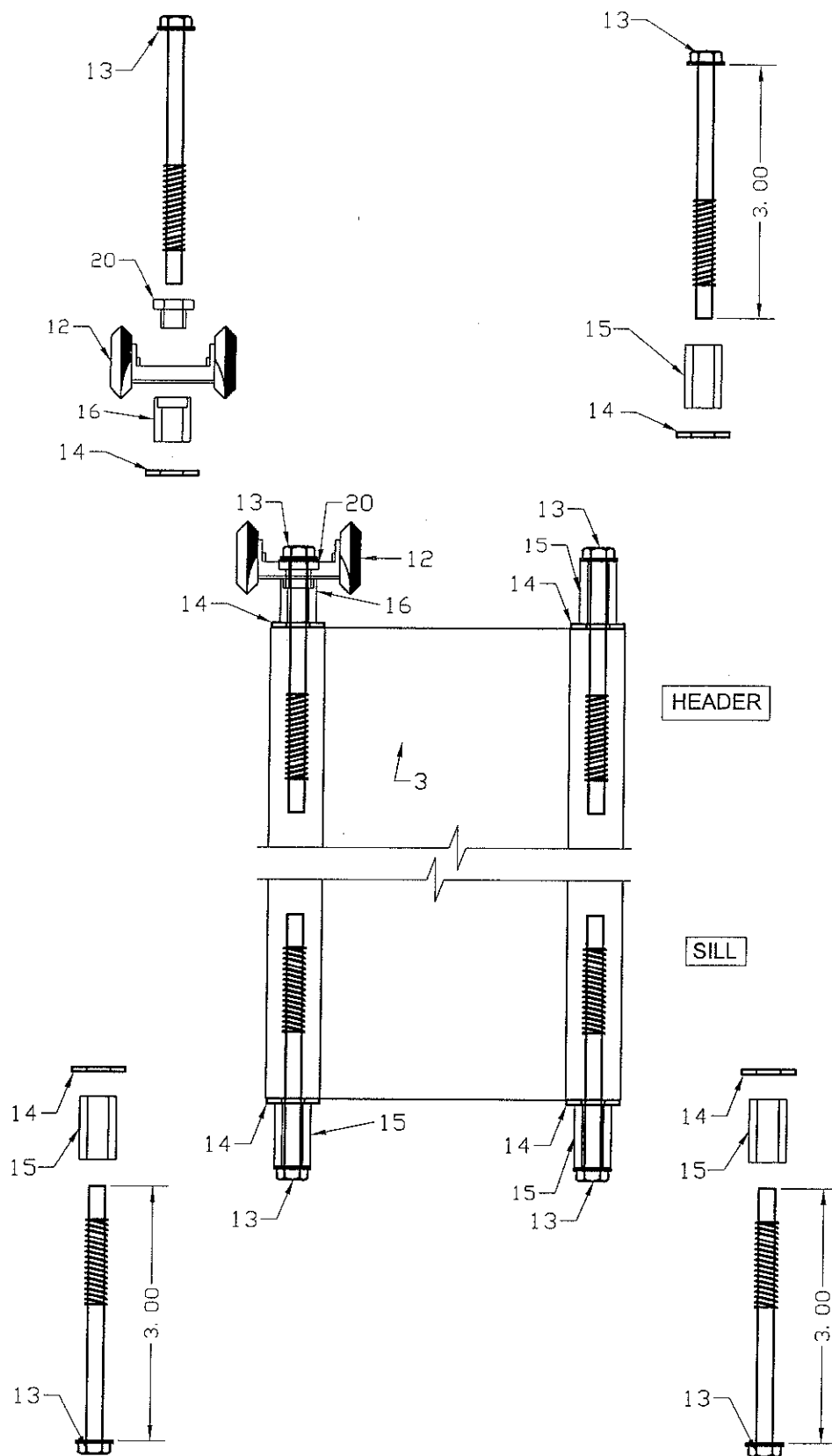
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DATE: 03/01/16
SCALE: NA
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SHEET
7 of 9

TYPICAL BLADE ASSEMBLY



BILL OF MATERIALS

ITEM	DESCRIPTION	MATERIAL	MANUFACTURER
1	1" WALL MOUNT TRACK	6063-T6 ALUMINUM	CROCI
1A	2" WALL MOUNT TRACK	6063-T6 ALUMINUM	CROCI
1B	3" WALL MOUNT TRACK	6063-T6 ALUMINUM	CROCI
2	CEILING TRACK	6063-T6 ALUMINUM	CROCI
3	ACCORDION BLADE	6063-T6 ALUMINUM	CROCI
4	LOCK		
5	LOCK BLADE INSERT	6063-T6 ALUMINUM	CROCI
6	MALE LOCK BLADE	6063-T6 ALUMINUM	CROCI
7	FEMALE LOCK BLADE	6063-T6 ALUMINUM	CROCI
8	STARTER BLADE	6063-T6 ALUMINUM	CROCI
9	"A" TRACK	6063-T6 ALUMINUM	CROCI
10	ADJUSTABLE TRACK	6063-T6 ALUMINUM	CROCI
10A	ADJUST. CHANNEL	6063-T6 ALUMINUM	CROCI
10B	ADJUST. CHANNEL W/ FLANGE	6063-T6 ALUMINUM	CROCI
11			
12	WHEEL CARRIER	PLATED STEEL/ NYLON	CROCI
13	1/4"x3" SCREW BLADE	410 STAINLESS STEEL	CROCI
14	1/2" SS FLAT WASHER	STAINLESS STEEL	CROCI
15	1"x7/16" BUSHING	NYLON	CROCI
16	1/2"x7/8" WHEEL BUSHING	NYLON	CROCI
17	1/8 BUILT-OUT ANGLES	6063-T6 ALUMINUM	CROCI
18	1/4"-2X3 ANGLE	6063-T6 ALUMINUM	CROCI
19	PUSH-BUTTON LOCK		
20	1/2"x 1/4" WHEEL SPACER	NYLON	CROCI
21	1" WALL MOUNT TRACK	6063-T6 ALUMINUM	CROCI
21A	2" WALL MOUNT TRACK	6063-T6 ALUMINUM	CROCI
21B	3" WALL MOUNT TRACK	6063-T6 ALUMINUM	CROCI
22	0.04" OPTIONAL COVER	ALUMINUM BREAK METAL	CROCI
23	UNIMATE LOCK BLADE	6063-T6 ALUMINUM	CROCI

ANCHOR SCHEDULE

ANCHOR	SUBSTRATE	DESCRIPTION	EMBED.	ED	MANUFACTURER
A	3000 PSI CONCRETE	1/4" TAPCON	1-3/4"	2-1/2"	ITW
		1/4" ULTRACON	1-3/4"	2-1/2"	ELCO
B	GF C90 CMU BLOCK	1/4" ULTRACON	2-1/4"	2-1/2"	ELCO
		1/4" TAPCON	1-1/4"	2-1/2"	ITW
C	WOOD (SG>=.55)	1/4" ULTRACON	1-1/4"	2-1/2"	ELCO
		1/4" TAPCONS/ ULTRACON	1-1/2"	1.0	ITW / ELCO
D	3000 PSI CONCRETE	#14 WOOD SCREWS	1-1/2"	1.0	GENERIC
E	3000 PSI CONCRETE	1/4-20 SOLID-SET	7/8"	3.0	ALL POINTS
	.125" ALUMINUM .11" 12GA STEEL	1/4-14 TAPPING SCREWS	1/8"	3/8	GR5 GENERIC

ANCHOR NOTES:
1- ANCHOR TYPE E TO BE INSTALLED IN 6063-T6 ALUMINUM OR ASTM A36 STEEL
2- WOOD MINIMUM SPECIFIC GRAVITY SG=0.55 SOUTHERN PINE OR MIXED MAPLE
3- ANCHORS HAVE BEEN EVALUATED UNDER ALUMINUM DESIGN MANUAL 2010 AND AMERICAN WOOD COUNCIL DESIGN MANUAL NDS 2012
4- ANCHORS ARE TO BE 300 SERIES STAINLESS STEEL OR PROTECTED WITH COATING SUFFICIENT TO PROVIDE CORROSION PROTECTION FOR THE INTENDED SERVICE.

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FAX: (754) 201-6046
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PEDRO M. DE FIGUEIREDO
LICENSE
No. 52609
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
ENGINEER SEAL
PEDRO DE FIGUEIREDO
PE 52609

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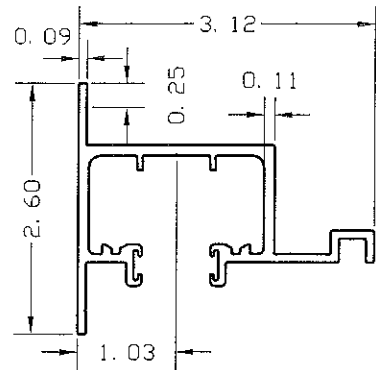
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DESIGN BY: PPMF

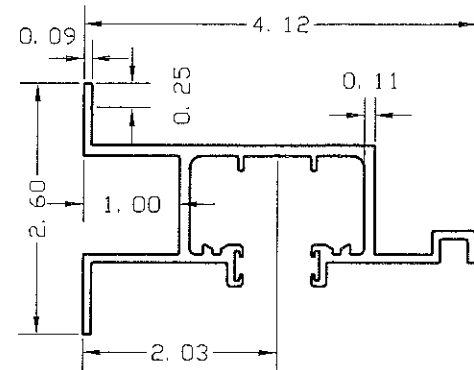
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SHEET
8 of 9

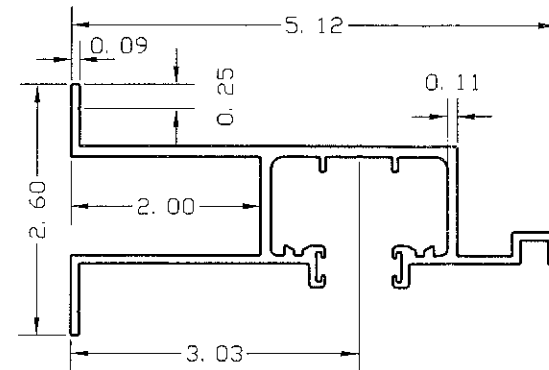
COMPONENTS



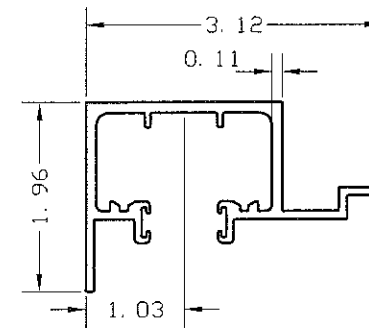
1- 1" WALL MOUNT TRACK



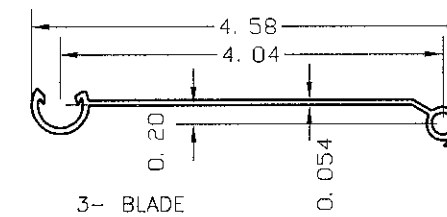
1A- 2" WALL MOUNT TRACK



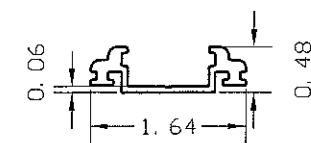
1B- 3" WALL MOUNT TRACK



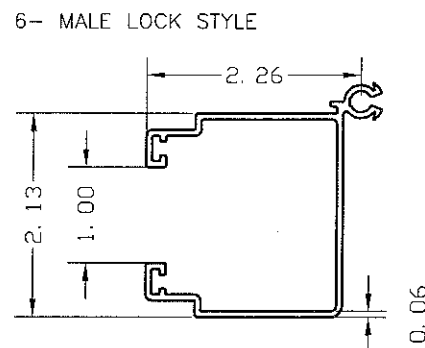
2- CEILING TRACK



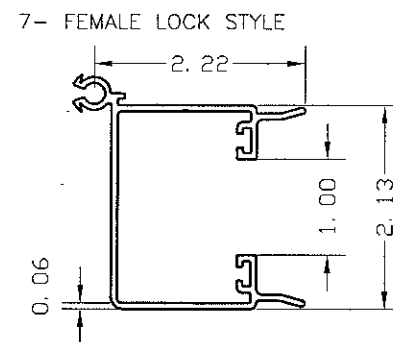
3- BLADE



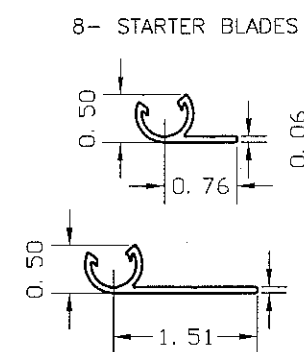
5- LOCK BLADE INSERT



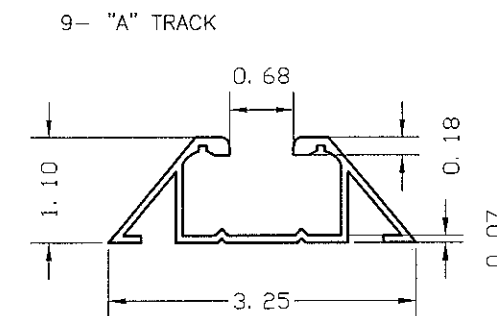
6- MALE LOCK STYLE



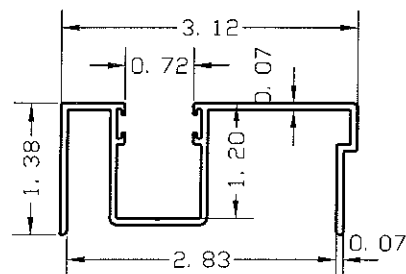
7- FEMALE LOCK STYLE



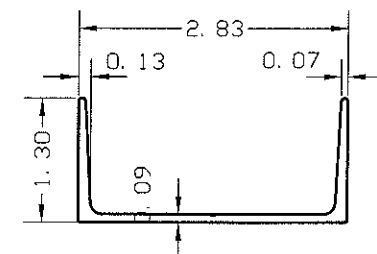
8- STARTER BLADES



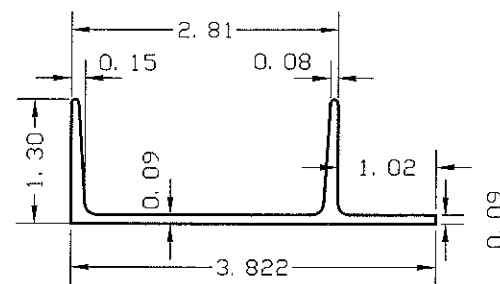
9- "A" TRACK



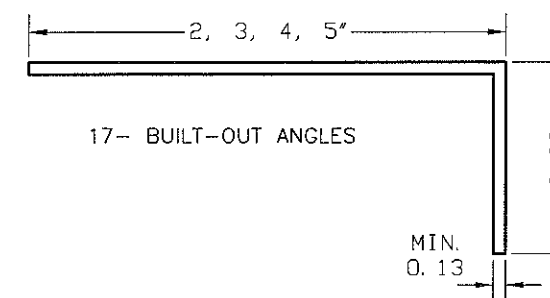
10-ADJUSTABLE SILL TRACK



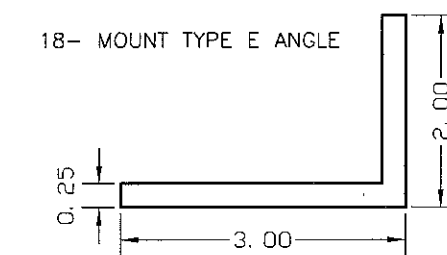
10A- ADJUSTABLE SILL CHANNEL



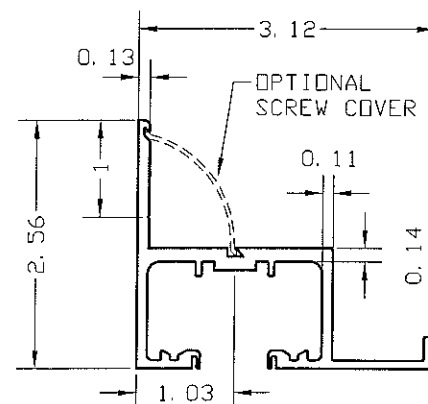
10B- ADJUSTABLE SILL CHANNEL W/ FLANGE



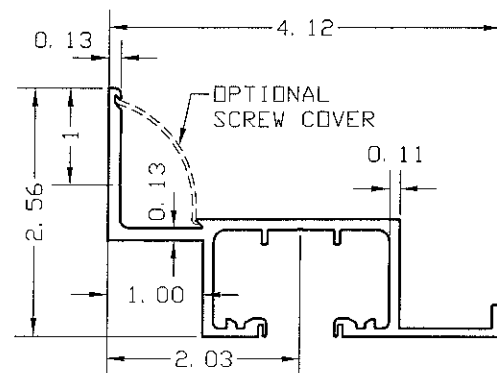
17- BUILT-OUT ANGLES



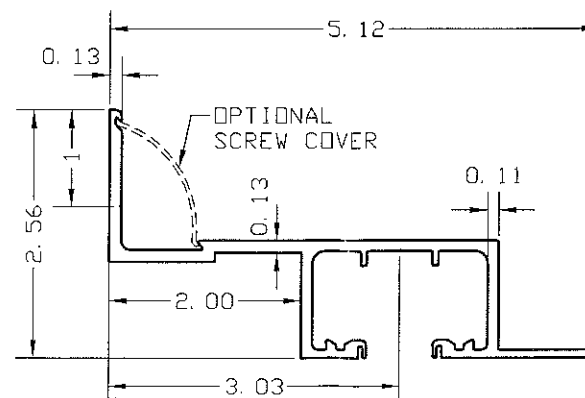
18- MOUNT TYPE E ANGLE



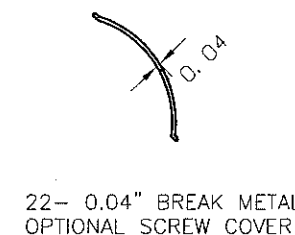
21- 1" WALL MOUNT TRACK



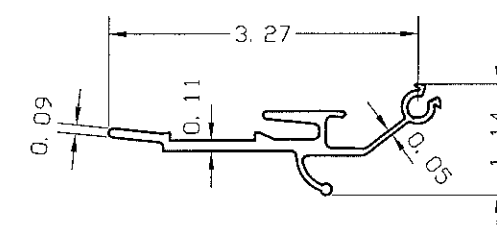
21A- 2" WALL MOUNT TRACK



21B- 3" WALL MOUNT TRACK



22- 0.04" BREAK METAL
OPTIONAL SCREW COVER



23- UNIMATE LOCK STYLE

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